








Science Coverage

Intended End Points					
EYFS		KS1		KS2	
To make observations of animals and plants and explain why some things occur.		To find out and describe the basic needs of all living things - plants and animals, including humans.		To classify plants and animals based on specific characteristics and identify how animals and plants are adapted to suit their environments.	
Children can observe a range of phenomena and describe what they see, hear and feel.		Children carry out hands on, first-hand comparative tests and talk about their findings using scientific language		Children ask their own scientific questions and understand how to plan and carry out fair tests in order to communicate their findings in a variety of ways.	
Children can explore and observe a range of places, objects and materials, identifying their similarities and differences		Identify and compare the suitability of a variety of everyday materials based on their simple properties and find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching		Compare and group together everyday materials on the basis of their properties and investigate that some solids will dissolve into a liquid and that some mixtures can be reversed.	
Autumn		Spring		Summer	
Year 1	<p style="text-align: center;">Everyday Materials</p> <p>This project teaches children that objects are made from materials. They identify a range of everyday materials and their sources. Children investigate the properties of materials and begin to recognise that a material's properties define its use.</p> 	<p style="text-align: center;">Human Senses</p> <p>This project teaches children that humans are a type of animal, known as a mammal. They name body parts and recognise common structures between humans and other animals. They learn about the senses, the body parts associated with each sense and their role in keeping us safe.</p> 	<p style="text-align: center;">Seasonal Change</p> <p>This project teaches children about the seasons, seasonal changes and typical seasonal weather and events. They learn about measuring the weather and the role of a meteorologist. Children begin to learn about the science of day and night and recognise that the seasons have varying day lengths in the UK.</p> 	<p style="text-align: center;">Plant Parts</p> <p>This project teaches children about wild and garden plants by exploring the local environment. They identify and describe the basic parts of plants and observe how they change over time.</p> 	<p style="text-align: center;">Animal Parts</p> <p>This project teaches children about animals, including fish, amphibians, reptiles, birds, mammals and invertebrates. They identify and describe their common structures, diets, and how animals should be cared for.</p> 
	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Compare and group together a variety of everyday materials on the basis of their simple physical properties. ✓ Describe the simple physical properties of a variety of everyday materials. ✓ Distinguish between an object and the material from which it is made. ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions. ✓ Develop understanding of the nature, processes and methods of science 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Identify and classify. ✓ Use their observations and ideas to suggest answers to questions. ✓ Gather and record data to help in answering questions. ✓ Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. ✓ Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). ✓ Identify, name, draw and label the basic parts of the human 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Observe and describe weather associated with the seasons and how day length varies. ✓ Observe changes across the four seasons. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions. ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. ✓ Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Identify and describe the basic structure of a variety of common flowering plants, including trees. ✓ Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions. ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. ✓ Develop understanding of the nature, processes and methods of science through different types of science enquiries that 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. ✓ Identify and name a variety of common animals that are carnivores, herbivores and omnivores. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions. ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.







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	through different types of science enquiries that help them to answer scientific questions about the world around them.	body and say which part of the body is associated with each sense.		help them to answer scientific questions about the world around them.	
Year 2	<p style="text-align: center;">Human Survival</p> <p>This project teaches children about the basic needs of humans for survival, including the importance of exercise, nutrition and good hygiene. They learn how human offspring grow and change over time into adulthood.</p> 	<p style="text-align: center;">Habitats</p> <p>This project teaches children about habitats and what a habitat needs to provide. They explore local habitats to identify and name living things and begin to understand how they depend on one another for food and shelter.</p> 	<p style="text-align: center;">Uses of Materials</p> <p>This project teaches children about the uses of everyday materials and how materials' properties make them suitable or unsuitable for specific purposes. They begin to explore how materials can be changed.</p> 	<p style="text-align: center;">Plant Survival</p> <p>This project teaches children about the growth of plants from seeds and bulbs. They observe the growth of plants first hand, recording changes over time and identifying what plants need to grow and stay healthy.</p> 	<p style="text-align: center;">Animal Survival</p> <p>This project teaches children about growth in animals by exploring the life cycles of some familiar animals. They build on learning about the survival of humans by identifying the basic needs of animals for survival, including food, water, air and shelter.</p> 
	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. ✓ Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Notice that animals, including humans, have offspring which grow into adults. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions. 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Identify and classify. ✓ Use their observations and ideas to suggest answers to questions. ✓ Gather and record data to help in answering questions. ✓ Explore and compare the differences between things that are living, dead, and things that have never been alive. ✓ Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. ✓ Identify and name a variety of plants and animals in their habitats, including microhabitats. ✓ Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions. ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Identify and name a variety of plants and animals in their habitats, including microhabitats. ✓ Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. ✓ Observe and describe how seeds and bulbs grow into mature plants. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions. ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. 	<ul style="list-style-type: none"> ✓ Ask simple questions and recognise that they can be answered in different ways. ✓ Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. ✓ Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). ✓ Gather and record data to help in answering questions. ✓ Identify and classify. ✓ Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. ✓ Identify and name a variety of plants and animals in their habitats, including microhabitats. ✓ Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. ✓ Notice that animals, including humans, have offspring which grow into adults. ✓ Observe closely, using simple equipment. ✓ Perform simple tests. ✓ Use their observations and ideas to suggest answers to questions ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
Year 3	<p style="text-align: center;">Animal Nutrition and The Skeletal System</p> <p>This project teaches children about the importance of nutrition for humans and other animals. They learn about the role of a skeleton and muscles and identify animals with different types of skeleton.</p>	<p style="text-align: center;">Forces and Magnets</p> <p>This project teaches children about contact and non-contact forces, including friction and magnetism. They investigate frictional and magnetic forces, and identify parts of a magnet and magnetic materials.</p>		<p style="text-align: center;">Plant Nutrition and Reproduction</p> <p>This project teaches children about the requirements of plants for growth and survival. They describe the parts of flowering plants and relate structure to</p>	<p style="text-align: center;">Light and Shadows</p> <p>This project teaches children about light and dark. They investigate the phenomena of reflections and shadows, looking for</p>



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	<ul style="list-style-type: none"> ✓ Ask relevant questions and using different types of scientific enquiries to answer them. ✓ Gather, record, classify and present data in a variety of ways to help in answering questions. ✓ Identify differences, similarities or changes related to simple scientific ideas and processes. ✓ Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. ✓ Identify that humans and some other animals have skeletons and muscles for support, protection and movement. ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. ✓ Set up simple practical enquiries, comparative and fair tests. ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. ✓ Use straightforward scientific evidence to answer questions or to support their findings. 	<ul style="list-style-type: none"> ✓ Ask relevant questions and using different types of scientific enquiries to answer them. ✓ Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. <ul style="list-style-type: none"> ✓ Compare how things move on different surfaces. ✓ Describe magnets as having two poles. ✓ Gather, record, classify and present data in a variety of ways to help in answering questions. ✓ Identify differences, similarities or changes related to simple scientific ideas and processes. ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ✓ Notice that some forces need contact between two objects, but magnetic forces can act at a distance. <ul style="list-style-type: none"> ✓ Observe how magnets attract or repel each other and attract some materials and not others. ✓ Predict whether two magnets will attract or repel each other, depending on which poles are facing. ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. ✓ Set up simple practical enquiries, comparative and fair tests. ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. ✓ Use straightforward scientific evidence to answer questions or to support their findings. 	<ul style="list-style-type: none"> ✓ Ask relevant questions and using different types of scientific enquiries to answer them. ✓ Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. ✓ Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. ✓ Gather, record, classify and present data in a variety of ways to help in answering questions. ✓ Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. ✓ Identify differences, similarities or changes related to simple scientific ideas and processes. ✓ Investigate the way in which water is transported within plants. <ul style="list-style-type: none"> ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. ✓ Set up simple practical enquiries, comparative and fair tests. ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. ✓ Use straightforward scientific evidence to answer questions or to support their findings. 	<ul style="list-style-type: none"> ✓ Ask relevant questions and using different types of scientific enquiries to answer them. ✓ Find patterns in the way that the size of shadows change. ✓ Gather, record, classify and present data in a variety of ways to help in answering questions. ✓ Identify differences, similarities or changes related to simple scientific ideas and processes. <ul style="list-style-type: none"> ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ✓ Notice that light is reflected from surfaces. ✓ Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. ✓ Recognise that shadows are formed when the light from a light source is blocked by a solid object. ✓ Recognise that they need light in order to see things and that dark is the absence of light. ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. ✓ Set up simple practical enquiries, comparative and fair tests. ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. ✓ Use straightforward scientific evidence to answer questions or to support their findings. 	
Year 4	Food and The Digestive System This project teaches children about the human digestive system. They explore the main parts, starting with the mouth and teeth, identifying	Sound This project teaches children about sound and how sounds are made and travel as vibrations through a medium to the ear. They learn about pitch and volume and find out how both can be changed.	States of Matter This project teaches children about solids, liquids and gases and their characteristic properties. They observe how materials change state as they are heated and cooled, and learn key terminology associated with these processes.	Grouping and Classifying This project teaches children about grouping living things, known as classification. They study the animal and plant kingdoms and use and create classification keys to identify living things.	Electrical Circuits and Conductors This project teaches children about electrical appliances and safety. They construct simple series circuits and name their parts and functions, including switches, wires and cells. They investigate electrical conductors and insulators and identify common features of conductors. It also teaches children about programmable devices. They combine their learning to design and make a nightlight.



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teeth types and their functions. They link this learning to animals' diets and construct food chains to show the flow of energy.



- ✓ Ask relevant questions and using different types of scientific enquiries to answer them.
- ✓ Construct and interpret a variety of food chains, identifying producers, predators and prey.
- ✓ Describe the simple functions of the basic parts of the digestive system in humans.
- ✓ Gather, record, classify and present data in a variety of ways to help in answering questions.
- ✓ Identify differences, similarities or changes related to simple scientific ideas and processes.
- ✓ Identify the different types of teeth in humans and their simple functions.
- ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- ✓ Recognise that environments can change and that this can sometimes pose dangers to living things.
- ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- ✓ Set up simple practical enquiries, comparative and fair tests.



- ✓ Ask relevant questions and using different types of scientific enquiries to answer them.
- ✓ Set up simple practical enquiries, comparative and fair tests.
- ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- ✓ Gather, record, classify and present data in a variety of ways to help in answering questions.
- ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- ✓ Identify differences, similarities or changes related to simple scientific ideas and processes.
- ✓ Use straightforward scientific evidence to answer questions or to support their findings.
- ✓ Identify how sounds are made, associating some of them with something vibrating.
- ✓ Recognise that vibrations from sounds travel through a medium to the ear.
- ✓ Find patterns between the pitch of a sound and features of the object that produced it.
- ✓ Find patterns between the volume of a sound and the strength of the vibrations that produced it.



- ✓ Compare and group materials together, according to whether they are solids, liquids or gases.
- ✓ Gather, record, classify and present data in a variety of ways to help in answering questions.
- ✓ Identify differences, similarities or changes related to simple scientific ideas and processes.
- ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- ✓ Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- ✓ Set up simple practical enquiries, comparative and fair tests.
- ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- ✓ Use straightforward scientific evidence to answer questions or to support their findings.







- ✓ Ask relevant questions and using different types of scientific enquiries to answer them.
- ✓ Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.
- ✓ Gather, record, classify and present data in a variety of ways to help in answering questions.
- ✓ Identify differences, similarities or changes related to simple scientific ideas and processes.
- ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- ✓ Recognise that living things can be grouped in a variety of ways.
- ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
- ✓ Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.
- ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.
- ✓ Use straightforward scientific evidence to answer questions or to support their findings.



- ✓ Ask relevant questions and using different types of scientific enquiries to answer them.
- ✓ Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
- ✓ Gather, record, classify and present data in a variety of ways to help in answering questions.
- ✓ Identify common appliances that run on electricity.
- ✓ Identify differences, similarities or changes related to simple scientific ideas and processes.
- ✓ Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.
- ✓ Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
- ✓ Recognise some common conductors and insulators, and associate metals with being good conductors.
- ✓ Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
- ✓ Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.




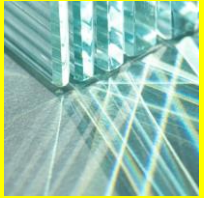


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<ul style="list-style-type: none"> ✓ Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. ✓ Use straightforward scientific evidence to answer questions or to support their findings. ✓ Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future. 	<ul style="list-style-type: none"> ✓ Recognise that sounds get fainter as the distance from the sound source increases. 			
<p>Year 5</p> <p>Earth and Space</p> <p>This project teaches children about our Solar System and its spherical bodies. They describe the movements of Earth and other planets relative to the Sun, the Moon relative to Earth and the Earth's rotation to explain day and night.</p> 	<p>Forces and Mechanisms</p> <p>This project teaches children about the forces of gravity, air resistance, water resistance and friction, with children exploring their effects. They learn about mechanisms, their uses and how they allow a smaller effort to have a greater effect.</p> 	<p>Human Reproduction and Ageing</p> <p>This project teaches children about animal life cycles, including the human life cycle. They explore human growth and development to old age, including the changes experienced during puberty and human reproduction.</p> 	<p>Properties and Change of Materials</p> <p>This project teaches children about the wider properties of materials and their uses. They learn about mixtures and how they can be separated using sieving, filtration and evaporation. They study reversible and irreversible changes, and use common indicators to identify irreversible changes.</p> 	
<ul style="list-style-type: none"> ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ✓ Use test results to make predictions to set up further comparative and fair tests. ✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. 	<ul style="list-style-type: none"> ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ✓ Use test results to make predictions to set up further comparative and fair tests. ✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and 	<ul style="list-style-type: none"> ✓ Describe the changes as humans develop to old age. ✓ Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. ✓ Describe the life process of reproduction in some plants and animals. ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ✓ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ✓ Use test results to make predictions to set up further comparative and fair tests. ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. 	<ul style="list-style-type: none"> ✓ Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. ✓ Demonstrate that dissolving, mixing and changes of state are reversible changes. ✓ Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. ✓ Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ✓ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ✓ Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. ✓ Use test results to make predictions to set up further comparative and fair tests. ✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. 	



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<ul style="list-style-type: none"> ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. ✓ Describe the movement of the Moon relative to the Earth. ✓ Describe the Sun, Earth and Moon as approximately spherical bodies. ✓ Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	<p>the falling object. ✓ Identify the effects of air resistance, water resistance and friction that act between moving surfaces.</p> <ul style="list-style-type: none"> ✓ Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 			
<p>Year 6</p>	<p>Circulatory System</p> <p>This project teaches children about the transport role of the human circulatory system, its main parts and their primary functions. They learn about healthy lifestyle choices and the effects of harmful substances on the body.</p> 	<p>Electrical Circuits and Components</p> <p>This project teaches children about electrical circuits, their components and how they function. They recognise how the voltage of cells affects the output of a circuit and record circuits using standard symbols. It also teaches children about programmable devices, sensors and monitoring. They combine their learning to design and make programmable home devices.</p> 	<p>Evolution and Inheritance</p> <p>This project teaches children how living things on Earth have changed over time and how fossils provide evidence for this. They learn how characteristics are passed from parents to their offspring and how variation in offspring can affect their survival, with changes (adaptations) possibly leading to the evolution of a species.</p> 	<p>Light Theory</p> <p>This project teaches children about the way that light behaves, travelling in straight lines from a source or reflector, into the eye. They explore how we see light and colours, and phenomena associated with light, including shadows, reflections and refraction.</p> 
<ul style="list-style-type: none"> ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ✓ Use test results to make predictions to set up further comparative and fair tests. ✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. ✓ Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. ✓ Describe the ways in which nutrients and water are transported within animals, including humans. 	<ul style="list-style-type: none"> ✓ Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. ✓ Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ✓ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. ✓ Use recognised symbols when representing a simple circuit in a diagram. ✓ Use test results to make predictions to set up further comparative and fair tests. 	<ul style="list-style-type: none"> ✓ Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. ✓ Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. ✓ Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents ✓ Record data and results of increasing complexity using scientific diagrams and 	<ul style="list-style-type: none"> ✓ Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. ✓ Identify scientific evidence that has been used to support or refute ideas or arguments. ✓ Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. ✓ Recognise that light appears to travel in straight lines. ✓ Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. ✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. ✓ Take measurements, using a range of scientific equipment, with increasing 	



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		<p>labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <ul style="list-style-type: none">✓ Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.✓ Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.✓ Use test results to make predictions to set up further comparative and fair tests.	<p>accuracy and precision, taking repeat readings when appropriate.</p> <ul style="list-style-type: none">✓ Use test results to make predictions to set up further comparative and fair tests.✓ Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.✓ Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.✓ Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.✓ Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
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